

Resource May 18, 2016

Natural Cholera Infection-Derived Immunity in an Endemic Setting

[Article published in The Journal of Infectious Diseases on 15-September-2014 by Ali M. et al.](#) [1]

ABSTRACT

Background: Live oral cholera vaccines may protect against cholera in a manner similar to natural cholera infections. However, information on which to base these vaccines is limited.

Methods: The study was conducted in a cholera-endemic population in Bangladesh. Patients with cholera (index patients) detected between 1991 and 2000 were age-matched to 4 cholera-free controls and then followed up during the subsequent 3 years.

Results: El Tor cholera was associated with a 65% (95% confidence interval [CI], 37%–81%; $P < .001$) lower risk of a subsequent El Tor episode. Reduction of the risk of subsequent El Tor cholera was similar for children <5 years and for older persons and was sustained during all 3 years of follow-up. Having El Tor Inaba cholera was associated with lower risks of both El Tor Inaba and El Tor Ogawa cholera, but having El Tor Ogawa cholera was associated only with a reduced risk of El Tor Ogawa cholera. O139 cholera was associated with a 63% (95% CI, –61% to 92%; $P = .18$) lower risk of subsequent O139 cholera, but there was no evidence of cross-protection between the O1 and O139 serogroups.

Conclusions: Live oral cholera vaccines designed to protect against the O1 and O139 serogroups should contain at least the Inaba serotype and strains of both serogroups.

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